Renal Pathology Experimental and Clinical - 2

**MP095**

**THE ROLE OF SERUM ICAM-1 LEVEL AND ICAM-1 GENE K469E POLYMORPHISM ON MICROALBUMINURIA IN OBESE INDIVIDUALS**

Bennur Esen1, Ahmet Engin Atay2, Halit Akbas3, Emel S. Gokmen2, Saadet Pilten4 and Dilek G. Yavuz5

1Bagcilar Education and Research Hospital, Internal Medicine and Nephrology, Istanbul, TURKEY, 2Bagcilar Education and Research Hospital, Istanbul, Turkey, 3Medical School of Harran University, Sanliurfa Turkey, Department of Genetics and Medical Biology, Sanliurfa, TURKEY, 4Bagcilar Education and Research Hospital, Istanbul, Turkey, Biochemistry, Istanbul, TURKEY, 5Marmara University, School of Medicine, Endocrinology and Metabolism, Istanbul, TURKEY

**Introduction and Aims:** A growing body of evidence suggest that obese individuals are under risk of renal parenchymal disorders when compared to nonobese counterparts. Microalbuminuria is the key and initial step in the renal involvement of obesity. Although obese individuals have well-recognized risk factors of microalbuminuria, some obese individuals without an overt risk factor may rapidly progress to microalbuminuria. The present study was performed to examine the role of ICAM-1 gene K469E polymorphism on microalbuminuria in obese and nonobese individuals without diabetes, hypertension, hyperlipidemia and advanced age.

**Methods:** Hundred obese patients patiens with PKD without a comorbidity enrolled into the study. Serum ICAM-1 level was analyzed by enzyme linked immunoabsorbent assay (ELISA) method. ICAM-1 gene K469E polymorphism was examined by restriction fragment length polymorphism-polymerase chain reaction (RFLP-PCR). Nepholometric method was used to examine urinary albumin loss, and microalbuminuria was measured by albumin to creatinine ratio. Body mass index (BMI) was determined by Tanita Body Composition Analyzer (Tanita Corporation of America, Illinois, USA).

**Results:** Obese individuals had significantly higher microalbuminuria and proteinuria level (p:0.043 and p:0.011; respectively). GG genotype of ICAM-1 gene was associated with higher uric acid, AST, microalbuminuria and proteinuria when compared to individuals with AA or AG genotype (p:0.041, p:0.038, p:0.047 and p:0.011; respectively). Serum ICAM-1 level was significantly associated with HbA1c, creatinine, uric acid, AST, ALT, LDH, total cholesterol, LDL-c, albumin, hemoglobin and microalbuminuria (p:0.027, p:0.002, p:0.011, p:0.001, p:0.006, p:0.043, p:0.012, p:0.046, p:0.001 and p:0.030; respectively)

**Conclusions:** ICAM-1 gene K469E polymorphism (GG genotype) is associated with microalbuminuria in obese individuals.

© The Author 2016. Published by Oxford University Press on behalf of ERA-EDTA. All rights reserved.